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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/695,976 | 10/26/2000 | Jin Young Kim | K-229 | 2954 |

7590 06/17/2004

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| EXAMINER |
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PATEL, NITIN

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| ART UNIT | PAPER NUMBER |
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2673

17

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/695,976

Applicant(s)

KIM ET AL.

Examiner

Nitin Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6, 7, 15, 20, 21, 30, 35, 36 and 45 is/are rejected.
- 7) ☒ Claim(s) 5, 8-14, 16-19, 22-29, 31-34, 37-44 and 46 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4,6,7,15,20,21,30,35,36,45 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA (Applicant's Admittance of Prior art) in view of Takahashi et al., (U.S. Patent No. 5,212,472).

As per claims 1,7 AAPA shows a plurality of electrodes pairs (element 16,16' and 17,17' In Fig.1A) successively formed on an upper electrodes (In fig.1A) and a dielectric layer (element 11 In Fig.1A) formed on the substrate to deposit the sustain electrodes and the priming electrodes (In Fig.1A).

AAPA does not show priming electrodes configured to increase the amount of priming particles in a discharge cell to reduce lag formed between pair of sustain electrodes. Takashashi shows PDP device that shortens discharge lag time between electrodes that prevents incorrect discharge (In col.6 lines 1-10 and lines 41-45 and lines 56-67 and In Col.7 lines 1-30 and Col. 10 lines 25-43 and In col.13 lines 38-47 and In Col.16 lines 27-34 and I Col.31 lines 17-54 and in Col.32 lines 34-45). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow the teaching of Takahashi's phase effect of priming effect to reduced discharge

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lag into PDP of a AAPA's because it would have display capable of being addressed at a high speed with a low voltage deterioration of contrast.

As per claim 2, AAPA shows the priming electrodes are commonly connected to a common node (In Fig. 2A).

As per claims 3,4 AAPA shows the priming electrodes are formed of Cr, Cu and Cr on the substrate (in fig.2B).

As per claim 6, AAPA shows black matrixes formed between the substrate and the common electrodes (In fig.3 elements 16,16').

As per claim 15,30,45 AAPA does not show priming electrodes configured to increase the amount pf priming particles in a discharge cell to reduce lag formed between pair of sustain electrodes. AAPA does not show priming electrodes configured to increase the amount pf priming particles in a discharge cell to reduce lag formed between pair of sustain electrodes. Takashashi shows PDP device that shortens discharge lag time between electrodes that prevents incorrect discharge (In col.6 lines 1-10 and lines 41-45 and lines 56-67 and In Col.7 lines 1-30 and Col. 10 lines 25-43 and In col.13 lines 38-47 and In Col.16 lines 27-34 and I Col.31 lines 17-54 and in Col.32 lines 34-45). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow the teaching of Takahashi's phase effect of priming effect to reduced discharge lag into PDP of a AAPA's because it would have display capable of being addressed at a high speed with a low voltage deterioration of contrast.

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As per claims 20,21,35,36 AAPA shows the second and third electrode is scan and address electrodes.

Allowable Subject Matter

3. Claims 5,8-14,16-19,22-29,31-34,37-44,46 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to teach or suggest the layer has a thickness of a 10 micrometer to 30 micrometer and as claimed in claim 6.

The prior art fails to teach or suggest the potential difference of 270 volts or below between on/off periods of the common pulses is lower than a discharge start voltage of the plasma display panel and common pulse in the on periods is 1microsecond below and the maximum potential difference between the scan pulse and the address pulse is more than 280 volts and time difference between the time when the common pulse is turned off and the time when the scan pulse is turned on is 500 nanoseconds as claimed in claims 8-14.

The prior art fails to teach or suggest the discharge cell having a second electrodes and a third electrode and the second electrode and the third electrode are configured to form wall charge proximate to the second electrode and the third electrode in response to a first voltage applied to the second electrode and a second voltage applied to the third electrode.

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Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 703-308-7024. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H Shalwala can be reached on 703-305-4938. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9618.

NP
June 13, 2004


Amare Mengistu
Primary Examiner